

# A REVISION OF THE FORMS OF THE LADDER-BACKED WOODPECKER (*DRYOBATES SCALARIS* [WAGLER]).

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This paper is the outgrowth of an attempt to determine the proper name for the ladder-backed woodpecker of Texas. The investigation has developed some interesting results, which it seems well to publish collectively. The writer is under great obligation to Mr. Ridgway for the use of all the material of this group that he had brought together for his "Birds of North and Middle America," as well as a large number of his measurements. Altogether 560 specimens have been available, comprising the collections of the U. S. National Museum, with that of the Biological Survey; the American Museum of Natural History; the Academy of Natural Sciences of Philadelphia; the Museum of Comparative Zoology at Cambridge, including the Bangs collection; the Carnegie Museum at Pittsburg; and the Field Museum of Chicago.

The ladder-backed woodpeckers, *Dryobates scalaris* (Wagler), range from the southwestern United States, in southern Colorado and southern Utah, to southeastern Mexico and British Honduras, chiefly in the Lower Austral and Tropical zones. They are strictly resident, and are preeminently birds of the chaparral and cactus, rarely frequenting the forest. In a general way the smallest forms inhabit the south and the largest forms the north. The six currently recognized races are here increased to fifteen. The adult females differ from the males in lacking all red on the pileum, black taking its place, and in being of smaller size; otherwise the sexes are identical. There is considerable individual variation in both size and color.

In all measurements, which are in millimeters, it has been the aim to use, as far as possible, only typical specimens, so that the averages and extremes may represent, not the limits of intermediate specimens, but standards for the various forms.

The following key may be of some assistance for purposes of identification, as well as serving for an exposition of salient characters.

KEY TO THE SUBSPECIES OF *DRYOBATES SCALARIS*, BASED ON ADULT MALES.

- a.* Outermost long rectrix (the second) with black spots or bars on whole of both vanes.<sup>1</sup>
- b.* Lower surface darker, more smoky.
- c.* Larger (wing usually more than 100 mm.); sides of breast *streaked* with black; black bars on upper parts wider; black postocular and malar stripes wider, the latter reaching bill.
- d.* Somewhat larger (wing averaging 104.4 mm.); lower surface darker; black bars on back broader; postocular stripe wider . . . *Dryobates scalaris bairdi*.
- d'.* Somewhat smaller (wing averaging 102.4 mm.); lower surface lighter; black bars on back narrower; postocular stripe narrower.  
*Dryobates scalaris centrophilus.*
- c'.* Smaller (wing less than 100 mm.); sides of breast *spotted* with black; black bars on upper parts narrower; black postocular and malar stripes narrower, the latter not reaching bill.
- d.* Larger (wing more than 93 mm.); black bars on basal part of exterior vane of outermost long rectrix (the second) averaging larger, never absent.  
*Dryobates scalaris scalaris.*
- d'.* Smaller (wing usually less than 93 mm.); black bars on basal part of exterior vane of outermost long rectrix (the second) reduced to spots, and averaging smaller, occasionally absent. . . . . *Dryobates scalaris ridgwayi.*
- b'.* Lower surface lighter, less smoky.
- c.* Larger (wing usually over 100 mm.; averaging more than 101 mm.).
- d.* Upper parts darker (the white bars narrower, the black bars broader); sides  
• of breast more often streaked; size somewhat larger.  
*Dryobates scalaris cactophilus.*
- d'.* Upper parts lighter (the white bars wider, the black bars narrower); sides  
• of breast less often streaked; size somewhat smaller.  
*Dryobates scalaris symplectus.*
- c'.* Smaller (wing under 100 mm.; averaging less than 98 mm.).
- d.* Postocular and malar stripes wider, the latter always reaching bill; size smaller (wing averaging 89.1 mm.); black bars on back somewhat narrower; primary coverts with somewhat less white; lower parts less heavily spotted.  
*Dryobates scalaris parvus.*
- d'.* Postocular and malar stripes narrower, the latter usually not reaching bill; size larger (wing averaging 96.5); black bars on back somewhat wider; primary coverts with somewhat more white; lower parts more heavily spotted . . . . . *Dryobates scalaris percus.*
- a'.* Outermost long rectrix (the second) with black spots or bars wanting on most of basal half of exterior vane.
- b.* Lower surface much darker.
- c.* Larger (wing more than 90 mm.); sides of breast *streaked* with black; primary coverts with more white.
- d.* Back and scapulars darker, the black bars wider, the white bars narrower; size decidedly greater (wing averaging more than 100 mm.); malar stripe not obsolete at base of bill; black bars on tail generally broader; streaks on sides of breast rather wider . . . . . *Dryobates scalaris agnus.*
- d'.* Back and scapulars lighter, the black bars narrower, the white bars wider; size decidedly smaller (wing averaging less than 100 mm.); malar stripe nearly always obsolete at base of bill; black bars on tail generally narrower; streaks on sides of breast rather narrower.  
*Dryobates scalaris sinaloensis.*

<sup>1</sup> In *Dryobates scalaris ridgwayi* these are occasionally wanting on proximal portion of outer vane.

- c'. Smaller (wing less than 90 mm.); sides of breast *spotted* with black; primary coverts with less white.....*Dryobates scalaris leucopitilurus*.
- b'. Lower surface much lighter.
- c. Smaller (wing less than 100 mm.); outer webs of primary coverts with very little or no white; postocular stripe rather broader; malar stripe obsolete at base of bill.
- d. Under parts lighter; size decidedly larger (wing not less than 95 mm.); lower surface less heavily spotted with black; black bars on back and tail broader.....*Dryobates scalaris graysoni*.
- d'. Under parts darker; size decidedly smaller (wing less than 95 mm.); lower surface more heavily spotted with black; black bars on back and tail narrower .....*Dryobates scalaris azelus*.
- c'. Larger (wing not less than 100 mm.); outer webs of primary coverts conspicuously spotted with white; postocular stripe not so broad; malar stripe not obsolete at base of bill.
- d. Decidedly smaller (wing averaging less than 104 mm.); ventral surface lighter; lighter above (the white bars on back averaging wider and more regular, the black bars narrower); black bars on posterior lower parts averaging less heavy.....*Dryobates scalaris lucasanus*.
- d'. Decidedly larger (wing averaging more than 104 mm.); ventral surface darker; darker above (the white bars on back averaging narrower and less regular, the black bars wider); black bars on posterior lower parts averaging somewhat heavier.....*Dryobates scalaris eremicus*.

DRYOBATES SCALARIS SCALARIS (Wagler).

*Picus scalaris* WAGLER, Isis, 1829, p. 511.

*Picus gracilis* LESSON, Rev. Zool., 1839, p. 41 (Mexico).

*Picus orizabae* CASSIN, Proc. Acad. Nat. Sci. Phila., 1863, p. 196 (Jalapa, Vera Cruz, Mexico).

*Chars. subsp.*—Size medium (wing of male averaging about 96 mm.); white bars of back wider than the black interspaces; exterior webs of three outer pairs of tail-feathers barred throughout with black and white, although the black bars occasionally incomplete basally; outer webs of primary coverts slightly spotted with white; malar stripe more or less obsolete at base of bill; lower surface smoky brownish; sides of breast and body lightly spotted with black.

*Description.*—Adult male, No. 37432, U.S.N.M.; Orizaba, Vera Cruz, Mexico, January 15, 1864; F. Sumichrast. Crown and nape black, the feathers of the former subterminally dull white, terminally scarlet vermilion, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; remaining upper parts black, all, excepting the superior tail-coverts, barred with white—these white bars nearly all wider than the black interspaces; tail black, the three external pairs of rectrices, including the dwarfed outermost one, much barred with dull white, except on basal portion of inner webs of the second and third; the fourth pair spotted with white on margin of outer vane; wings black, the remiges spotted conspicuously on both webs with white, these spots forming, on tertials fairly well-defined bars, the

medium and greater coverts heavily, the lesser and primary coverts sparingly, spotted on both webs with white; sides of head and neck light smoky brownish, the superciliary stripe rather more whitish; a postocular and a malar stripe of black, which meet on the side of the neck, the malar stripe, however, more or less obsolete at the base of the bill; nasal tufts and entire inferior surface smoky brownish, paler, even whitish on crissum; sides of breast and body with small spots of black, flanks and crissum with bars of the same color; lining of wing white, with spots of black.

*Measurements*.—Male <sup>1</sup>: Wing, 95–97 (average, 96.3) mm.; tail, 52.5–55 (53.5); exposed culmen, 19.5–21 (20.2); tarsus, 18; middle toe, 11.5–12 (11.8).

Female: <sup>2</sup> Wing, 93–98 (95.1); tail, 49–52.5 (50.1); exposed culmen, 17.5–19.5 (18.5); tarsus, 16–16.5 (16.3); middle toe, 10.5–12 (11.6).

*Type-locality*.—"Mexico:" i. e., central part of the State of Vera Cruz, Mexico.

*Geographical distribution*.—Central eastern Mexico: north to Alta Mira, southeastern Tamaulipas; west to Valles, eastern San Luis Potosi; Jico and Orizaba, central western Vera Cruz; south to Cordoba and Orizaba, central western Vera Cruz; east to Carrizal, central eastern Vera Cruz; and Tampico, southeastern Tamaulipas.

Specimens examined from various parts of the range of this form, as above outlined, are very uniform in size. A female from Chalchicomula, Puebla, has the black bars on outer web of outermost long tail-feather much reduced, and in this appears to be aberrant, verging toward *Dryobates scalaris azelus*,<sup>3</sup> but its other characters proclaim it the present form. Birds from extreme southeastern Tamaulipas (Alta Mira and Tampico) are somewhat intermediate in color between this race and *Dryobates scalaris symplectus*,<sup>4</sup> but in general characters are nearer *D. s. scalaris*.

In the original description of *Dryobates scalaris* <sup>5</sup> the type-locality given is simply "Mexico;" but the measurements there added,<sup>6</sup> and the subsequent remarks of Malherbe,<sup>7</sup> who examined the type, evidently refer to the bird of central Vera Cruz, to which we therefore here restrict the name *scalaris*. The *Picus gracilis* of Lesson, poorly described<sup>8</sup> from "Mexico," is the same form, as Malherbe's remarks on the type <sup>9</sup> clearly indicate. The *Picus orizabae*

<sup>1</sup> Three specimens, from the State of Vera Cruz, Mexico.

<sup>2</sup> Five specimens, from Vera Cruz and eastern San Luis Potosi, Mexico.

<sup>3</sup> See p. 147.

<sup>4</sup> See p. 155.

<sup>5</sup> *Picus scalaris* Wagler, Isis, 1829, p. 511.

<sup>6</sup> Ibid. These, reduced to millimeters, are: Wing, 95.3; tail, 54.9; exposed culmen, 17.5; tarsus, 17.

<sup>7</sup> Mon. Pictées, vol. 1, 1861, p. 116, et seq.

<sup>8</sup> Rev. Zool., 1839, p. 41.

<sup>9</sup> Mon. Pictées, vol. 1, 1861, p. 117.



of Cassin,<sup>1</sup> from Jalapa, Vera Cruz, the type of which we have seen, is also a synonym of *Dryobates scalaris scalaris*. Malherbe's *Picus scalaris* var. *d'orizaba*,<sup>2</sup> commonly cited under *D. s. scalaris*, is merely a vernacular designation, and has therefore no real standing in nomenclature.

Twelve specimens of this form have been examined, from the following localities in Mexico:

*San Luis Potosi*.—Valles.

*Tamaulipas*.—Alta Mira; Tampico.

*Vera Cruz*.—Carrizal; Jico; Mirador; Orizaba.

DRYOBATES SCALARIS RIDGWAYI,<sup>3</sup> new subspecies.

*Chars. subsp.*—Similar to *Dryobates scalaris scalaris*, but much smaller; and the black bars (of *scalaris*) on basal part of exterior web of outermost long rectrix averaging smaller and reduced to spots, sometimes absent.

*Description*.—Type, adult male, No. 187546, U.S.N.M., Biological Survey collection; Jaltipan, Vera Cruz, Mexico, February 3, 1904; E. W. Nelson and E. A. Goldman. Crown and nape black, the feathers of the former subterminally brownish white, terminally poppy red, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; rest of upper body surface black, all, except the superior tail-coverts, barred with dull white—these white bars decidedly wider than the black interspaces; tail black, the three exterior pairs of feathers, including the dwarfed outermost one, much barred with brownish white except on basal portion of inner web of second and third, the black interspaces reduced to spots on basal portion of the external web of the outermost long rectrix (the second); the fourth pair of rectrices barred distally with brownish white; wings black, much spotted with white, this forming, on tertials, fairly well-defined bars; sides of head and neck light smoky brownish, the superciliary stripe somewhat paler; a postocular and a malar stripe of black, which meet on the side of the neck, the malar stripe, however, obsolete anteriorly; nasal tufts and whole lower surface smoky brown, paler posteriorly; sides of breast and body with small spots of black; flanks and crissum with bars of the same; lining of wing white, with spots of black.

*Measurements*.—Male:<sup>4</sup> Wing, 88–92.5 (average, 90.8) mm.; tail, 45–50.5 (47.8); exposed culmen, 18.5–20.5 (19.1); tarsus, 16–17.5 (16.6); middle toe, 11.5–12 (11.8).

<sup>1</sup> Proc. Acad. Nat. Sci. Phila., 1863, p. 196.

<sup>2</sup> Mon. Pictées, vol. 3, 1861, pl. 27, fig. 6.

<sup>3</sup> Named for Mr. Robert Ridgway, as a slight token of appreciation on many and various courtesies.

<sup>4</sup> Four specimens, from the State of Vera Cruz, Mexico.

Female:<sup>1</sup> Wing, 86–89.5 (88); tail, 47.5; exposed culmen, 17–19.5 (18); tarsus, 16; middle toe, 11–11.5 (11.3).

*Type-locality*.—Jaltipan, Vera Cruz, Mexico.

*Geographical distribution*.—Southeastern Vera Cruz, Mexico: northwest to Tlacotalpam; east to Jaltipan; and south to Pasa Nueva.

This new race may be distinguished from *Dryobates scalaris parvus*, of Yucatán, by its decidedly lighter upper parts—the black bars narrower, the white ones broader; much narrower postocular and malar stripes, the latter not reaching the bill; smaller or absent black markings on outer vane of outermost long rectrix; darker lower surface; and less heavily spotted sides of breast and body. It differs from *Dryobates scalaris bairdi*, of Hidalgo, in being very much smaller; in having the upper parts decidedly lighter, the black bars being narrower; black bars on tail not so wide; black markings on outer web of outermost long rectrix smaller; postocular and malar stripes much narrower, the latter not reaching the bill; lower surface paler, *spotted* instead of streaked, and less heavily thus marked, with black.

Of this race we have seen seven examples, representing the following Mexican localities:

*Vera Cruz*.—Jaltipan; Tlacotalpam; Pasa Nueva.

**DRYOBATES SCALARIS PERCUS, new subspecies.**

*Chars. subsp.*—Similar to *Dryobates scalaris ridgwayi*, but larger; lower surface paler and much more heavily spotted with black; upper parts darker, the white bars much narrower, the black bars wider; postocular and malar stripes somewhat broader; spots of black on white portion of outer vane of outermost long rectrix (the second) averaging larger, inclining sometimes to bars.

*Description*.—Type, adult male, No. 193906, U.S.N.M., Biological Survey collection; Comitán, Chiapas, Mexico, April 15, 1904; E. W. Nelson and E. A. Goldman. Crown and nape black, the feathers of the former subterminally dull white, terminally poppy red, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; remainder of upper parts black, all, excepting the superior tail-coverts, barred with white—these white bars narrower than the black interspaces; tail black, the three outer pairs of feathers, including the dwarfed exterior one, much barred with dull white, excepting on basal portion of inner webs of the second and third, the black interspaces on the outer vanes often reduced to spots, particularly on basal part; the fourth pair irregularly and broadly margined with white on outer vanes; wings black, with numerous spots of white, which, on tertials, become fairly well-defined bars; sides of head and neck deep brownish

<sup>1</sup> Three specimens, from the same State.

white; a postocular and a malar stripe of black, which meet on the side of the neck, the malar stripe, however, more or less obsolete at base of bill; nasal tufts and lower surface pale smoky brownish, the chin, sides, flanks, and crissum decidedly whitish; sides and middle of breast and sides of body heavily spotted with black; flanks and crissum barred with the same; lining of wing white, spotted with black.

*Measurements*.—Male:<sup>1</sup> Wing, 94–99 (average, 96.5) mm.; tail, —; exposed culmen, 17.5–20 (18.8); tarsus, 17; middle toe, 11.5–12.5 (12).

Female:<sup>2</sup> Wing, 90–94.5 (92.3); tail, —; exposed culmen, 16.5–18 (17.3), tarsus, 16–17 (16.5); middle toe, 11.5–12 (11.8).

*Type-locality*.—Comitan, Chiapas, Mexico.

*Geographical distribution*.—Southern Chiapas, Mexico: north to Comitan and Tuxtla Gutierrez, south central Chiapas; east to San Vicente, southeastern Chiapas; and west to Tuxtla Gutierrez.

This form is easily to be separated from *Dryobates scalaris bairdi* by its greatly inferior size; narrower postocular and malar stripes; more restricted black bars on upper parts; lighter lower surface, which is more heavily marked with *spots*—not streaks—of black.

Only four birds examined, from the subjoined Mexican localities:

*Chiapas*.—Comitan; San Vicente; Tuxtla Gutierrez.

#### DRYOBATES SCALARIS PARVUS (Cabot).

*Picus parvus* CABOT, Boston Journ. Nat. Hist., vol. 5, 1845, p. 92.

*Picus vagatus* CASSIN, Proc. Acad. Nat. Sci. Phila., 1863, p. 196 ("Mexico;" i. e., Yucatan).

*Chars. subsp.*—Resembling *Dryobates scalaris percus*, but decidedly smaller; postocular and malar stripes wider, the latter always reaching bill; black bars on back rather narrower; primary coverts with somewhat less white; and lower parts less heavily spotted.

*Measurements*.—Male:<sup>3</sup> Wing, 87–92 (average, 89.1) mm.; tail, 46–53.5 (48.4); exposed culmen, 18–20.5 (19.4); tarsus, 15–17 (16.3); middle toe, 11–12.5 (11.5).

Female:<sup>4</sup> Wing, 86–89.5 (87); tail, 46–49 (47.3); exposed culmen, 16–18 (16.9); tarsus, 15.5–16.5 (15.9); middle toe, 11–12 (11.5).

*Type locality*.—Ticul, Yucatan, Mexico.

*Geographical distribution*.—Northern Yucatan, Mexico: north to Progreso, San Felipe, and La Vega; east to Cozumel Island, coast of northeastern Yucatan; south to Chichen Itza, north central Yucatan; west to Merida, northwestern Yucatan.

This well-marked subspecies differs greatly from *Dryobates scalaris bairdi*, for it is much smaller; has paler upper parts, since the black

<sup>1</sup> Two specimens, from the State of Chiapas, Mexico.

<sup>2</sup> Two specimens, from the same State.

<sup>3</sup> Ten specimens, from Yucatan, Mexico.

<sup>4</sup> Six specimens, from the same State.

bars are decidedly narrower; less broad black tail-bars, on the outermost long rectrix particularly; the lower surface of body much lighter, more heavily marked on breast and sides, *spotted*, instead of streaked, with black. It may be distinguished from *Dryobates scalaris scalaris* by its smaller size, rather darker upper surface, the black bars being somewhat broader, the white bars narrower; wider postocular and malar stripes, the latter extending to the bill; and paler under parts, more heavily spotted with black.

So far as known, this race is confined to northern Yucatan, but its range may be extended by future explorations.

The bird described by Cassin as *Picus vagatus*,<sup>1</sup> from "Mexico," is the same as the Yucatan race. This Mr. Witmer Stone has kindly determined by an examination of the type in the collection of the Philadelphia Academy of Sciences and a comparison with typical examples of *Dryobates scalaris ridgwayi* and *Dryobates scalaris parvus*. Mr. Stone furnishes the following measurements of the type: Wing, 88; tail, 54; exposed culmen, 18; tarsus, 14.5 mm.

Specimens examined, 24, from Mexican localities as under:

*Yucatan*.—La Vega; Chichen Itza; Progreso; Merida; Temax: San Felipe; Tekanto; west of Tunkas.

**DRYOBATES SCALARIS LEUCOPTILURUS, new subspecies.**

*Chars. subsp.*—Like *Dryobates scalaris parvus*, but still smaller; lower surface much darker, but somewhat less heavily spotted; outer webs of second (the first long) pair of rectrices without bars basally; black bars on upper parts rather narrower and more irregular; primary coverts with rather less white on outer webs.

*Description*.—Type, adult male, No. 25254, Carnegie Museum; Pine Ridge, near Manatee Lagoon, British Honduras; October 26, 1905; Morton E. Peck. Crown and nape black, the feathers of the former subterminally dull white, terminally poppy red, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; remaining upper parts black, all, excepting the superior tail-coverts, barred with white, these white bars somewhat wider than the black interspaces; tail black, the three outer pairs of feathers, including the dwarfed outermost one, barred with white except on basal portion of inner webs of the second and third, but the outer vanes of the second (the first long pair) and third almost wholly white basally; the fourth pair largely white on distal half of outer vanes; wings black, with numerous spots of white, which, on the tertials and some of the inner long wing-coverts, become fairly well-defined bars; sides of head and neck pale smoky brownish; a broad postocular and a malar stripe of black, which meet on the side of the neck;

<sup>1</sup> Proc. Acad. Nat. Sci. Phila., 1863, p. 196.



nasal tufts and ventral surface of body smoky brown, the chin and crissum paler; sides and middle of breast and sides of body heavily spotted with black; the flanks and crissum barred with the same; lining of wing brownish white, spotted with black; "iris brownish red; bill dark bluish; feet greenish blue."

*Measurements.*—Male:<sup>1</sup> Wing, 85–88.5 (average, 86.8) mm.; tail, 43–48.5 (45.8); exposed culmen, 18–19 (18.5); tarsus, 16.5; middle toe, 11.5–12 (11.8).

Female:<sup>2</sup> Wing, 84; tail, 44; exposed culmen, 16.5; tarsus, 15; middle toe, 11.5.

*Type-locality.*—Pine Ridge, near Manatee Lagoon, central eastern British Honduras.

*Geographical distribution.*—Southeastern British Honduras; north to Manatee Lagoon, central eastern British Honduras; south to Yecacos Lagoon.

This is the most diminutive of all the races of *Dryobates scalaris*, and seems to be very restricted in distribution. The series available is small, but the differences that these birds show, coupled with their isolated habitat, seem to warrant subspecific recognition.

Four examples seen, from the localities below:

*British Honduras.*—Yecacos Lagoon; Pine Ridge near Manatee Lagoon.

DRYOBATES SCALARIS AZELUS, new subspecies.

*Chars. subsp.*—Much like *Dryobates scalaris leucoptilurus*, but of decidedly greater size; lower parts lighter; postocular and malar stripes somewhat narrower, the latter not reaching the bill; less black on the outer long tail-feathers, particularly on the exterior webs.

*Description.*—Type, adult male, No. 185060, U.S.N.M., Biological Survey collection; La Salada, Michoacan, March 19, 1903; E. W. Nelson and E. A. Goldman. Crown and nape black, the feathers of the former subterminally dull white, terminally scarlet vermilion, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; remaining upper parts black, all, excepting the superior tail-coverts, barred with white—these white bars narrower than the black interspaces; tail black, the three outer pairs of feathers, including the dwarfed outermost one, barred broadly with white, except on basal portion of inner webs of the second and third, but the outer vanes of the second (the first long pair) and third wholly white basally; the fourth pair distally barred with white, and broadly margined on median portion of outer webs with white; wings black, with numerous spots of white (except on primary coverts, alula, and some of the lesser coverts), which, on tertials and some of the inner long upper

<sup>1</sup> Two specimens, from British Honduras.

<sup>2</sup> One specimen, from the same country.

wing-coverts, become well-defined bars; sides of head and neck deep brownish white; a black postocular and a black malar stripe, which meet on the side of the neck, the malar stripe, however, obsolete anteriorly; nasal tufts and lower surface light smoky brown, the chin, abdomen, flanks, and crissum whitish; sides and middle of breast, and sides of body heavily spotted with black; the flanks and crissum barred with the same; lining of wing brownish white, spotted with black.

*Measurements*.—Male:<sup>1</sup> Wing, 92 mm.; tail, 48.5; exposed culmen, 18.8; tarsus, 15.5; middle toe, 11.

*Type-locality*.—La Salada, Michoacan, Mexico.

*Geographical distribution*.—Southern Mexico: west to La Salada, central western Michoacan; north to Chietla, southwestern Puebla; east to Tlacolula and Oaxaca, west central Oaxaca; south to Sola, southwestern Oaxaca, and Amula, central Guerrero.

This form is superficially much like *Dryobates scalaris sinaloensis*, but differs in its smaller size; spotted instead of streaked breast and sides, these parts more heavily marked; lighter under surface; and somewhat less white on outer webs of primary coverts.

Curiously enough, this new form much more closely resembles *Dryobates scalaris leucoptilurus* from British Honduras, and *Dryobates scalaris sinaloensis*, from Sinaloa, Mexico, than it does any of the geographically adjoining races. Although only the type has been available for examination in this connection, this example is so different from *Dryobates scalaris centrophilus*, from Jalisco,<sup>2</sup> *Dryobates s. bairdi* from Hidalgo and Mexico, *Dryobates scalaris ridgwayi*, from Vera Cruz, and *Dryobates scalaris percus*, from Chiapas, that it deserves separation. Another specimen, from Chietla, Puebla, was examined by Mr. Ridgway a number of years ago,<sup>3</sup> and he is now convinced that it should be referred to this race, an impression borne out by his printed remarks on this bird.<sup>4</sup> The present species (*Dryobates scalaris*) has been recorded from localities in the States of Guerrero and Oaxaca,<sup>5</sup> and these States, without much doubt, should be included in the range of this form.

#### DRYOBATES SCALARIS GRAYSONI (Baird).

*Picus scalaris*, var. *graysoni* BAIRD, in Baird, Brewer, and Ridgway, Hist. North Amer. Birds, Land Birds, vol. 2, 1874, pp. 501, 517.

*Chars. subsp.*—Resembling *Dryobates scalaris azelus*, but decidedly larger; under surface paler, and much less heavily spotted, sometimes streaked, with black; postocular and malar stripes wider;

<sup>1</sup> One specimen, the type, from the State of Michoacan, Mexico.

<sup>2</sup> See p. 157.

<sup>3</sup> Proc. U. S. Nat. Mus., vol. 9, 1886, p. 159.

<sup>4</sup> Ibid.

<sup>5</sup> Hargitt, Cat. Birds Brit. Mus., vol. 18, 1890, p. 249.

black bars on outer long tail-feathers wider; black bars on upper parts broader.

*Measurements*.—Male: <sup>1</sup> Wing, 95–99 (average, 97.7) mm.; tail, 51–57 (54.5); exposed culmen, 20.5–23 (22.1); tarsus, 16.5–18 (17.4); middle toe, 12.5–13.5 (12.9).

Female: <sup>2</sup> Wing, 92–98 (95); tail, 49–56 (53.6); exposed culmen, 18.5–20 (19.3); tarsus, 16.5–17.5 (17); middle toe, 11.5–12.5 (12).

*Type-locality*.—Tres Marias Islands, Tepic, Mexico.

*Geographical distribution*.—Tres Marias Islands, Tepic, Mexico.

The present race differs from *Dryobates scalaris lucasanus* in smaller size; in having the outer webs of primary coverts usually without white spots, never with large ones; postocular stripe rather broader; malar stripe obsolete, or nearly so, at base of bill; and sides of breast less heavily spotted.

The original citation of this subspecies is sometimes given as ‘Lawrence, Mem. Bost. Soc. Nat. Hist., vol. 2, 1874, p. 294;’ but here only a *nomen nudum* is found.

Of this race we have handled altogether 14 specimens, all from the Tres Marias Islands, Tepic, Mexico, and most of them from Maria Madre Island.

#### DRYOBATES SCALARIS SINALOENSIS Ridgway.

*Dryobates scalaris sinaloensis* RIDGWAY, Man. North Amer. Birds, 1887, p. 285.

*Chars. subsp.*—Similar to *Dryobates scalaris graysoni*, but smaller; lower surface much darker, the sides of the breast always *streaked*, instead of spotted, and more conspicuously thus marked, with black; black bars on upper parts and on tail narrower; postocular stripe rather narrower; outer webs of primary coverts with somewhat more white.

*Measurements*.—Male: <sup>3</sup> Wing, 94–95 (average, 94.5) mm.; tail, 43.5–53 (48.4); exposed culmen, 19–21.5 (20.3); tarsus, 16.5–17 (16.8); middle toe, 12–13 (12.6).

Female: <sup>4</sup> Wing, 93–96 (94.6); tail, 53.5–55.5 (54.5); exposed culmen, 17.5–19 (18.2); tarsus, 16–17 (16.3); middle toe, 11–12.5 (11.8).

*Type-locality*.—Near Mazatlan, Sinaloa, Mexico.

*Geographical distribution*.—Southern and central Sinaloa, Mexico: north to Culiacan, central Sinaloa; west to Mazatlan; south to Plomosas; east to Juan Lisiarraga Mountain, southeastern Sinaloa.

Specimens examined, 11, from the subjoined localities in western Mexico:

*Sinaloa*.—Mazatlan; near Mazatlan; Culiacan; Plomosas; Juan Lisiarraga Mountain.

<sup>1</sup> Nine specimens, from the Tres Marias Islands, Tepic, Mexico.

<sup>2</sup> Four specimens, from the same islands.

<sup>3</sup> Four specimens, from the State of Sinaloa, Mexico.

<sup>4</sup> Five specimens, from the same State.

## DRYOBATES SCALARIS AGNUS, new subspecies.

*Chars. subsp.*—Like *Dryobates scalaris sinaloensis*, but decidedly larger; back and scapulars darker, the black bars wider, the white bars narrower; malar stripe not obsolete at base of bill, though sometimes obsolescent; black bars on outer tail-feathers usually wider; streaks on sides of breast rather broader.

*Description.*—Type, adult male, No. 164107, U.S.N.M., Biological Survey collection; Camoa, Rio Mayo, Sonora, November 6, 1898; E. A. Goldman. Crown and nape black, the feathers of the former subterminally dull white, terminally poppy red, this producing a mottled appearance on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; remaining upper parts black, all, excepting the superior tail-coverts, barred with white—these white bars decidedly narrower than the black interspaces; tail black, the three outer pairs of rectrices, including the dwarfed outermost one, barred with white except on basal portion of inner webs of the third pair, but the outer vanes of the second (the first long pair) and third wholly white basally; the fourth pair tipped, and broadly margined on distal two-thirds of outer vanes, with white; wings black, with numerous white spots, which, on the tertials, become fairly well-defined bars; sides of head and neck rather light smoky brown; a broad postocular and a malar stripe of black, which meet on the side of the neck; nasal tufts and lower surface smoky brown, the crissum paler; sides of breast and body with broad streaks of black, the flanks and crissum with bars of the same; lining of wing brownish white, spotted with black.

*Measurements.*—Male <sup>1</sup>: Wing, 100–101.5 (average, 100.8) mm.; tail, 58–59.5 (58.8); exposed culmen, 20–23 (21.5); tarsus, 17; middle toe, 13.

Female: <sup>2</sup> Wing, 95–98.5 (96.8); tail, 56.5–60.5 (58.5); exposed culmen, 19.5–20 (19.8); tarsus, 16–16.5 (16.3); middle toe, 12.

*Type-locality.*—Camoá, Rio Mayo, Sonora.

*Geographical distribution.*—Southern Sonora, Mexico: northwest to Batamotal, southwestern Sonora; and southeast to Camoa, southeastern Sonora.

Of this race four examples have been seen, from the subjoined Mexican localities:

*Sonora.*—Camoá; Batamotal.

## DRYOBATES SCALARIS LUCASANUS (Baird).

*Picus lucasanus* BAIRD, Proc. Acad. Nat. Sci. Phila., 1859, p. 302 (Xantus MS.)

*Chars. subsp.*—Resembling *Dryobates scalaris agnus*, but somewhat larger; lower surface much lighter, and the sides of breast *spotted*, rarely streaked; black bars on upper parts decidedly broader; white

<sup>1</sup> Two specimens, from southern Sonora, Mexico.

<sup>2</sup> Two specimens, from the same locality.



bars on wings averaging narrower; and spots on outer webs of primary coverts usually much larger.

*Measurements*.—Male:<sup>1</sup> Wing, 100–105 (average 102) mm.; tail, 60.5–66 (63); exposed culmen, 23.5–25 (24.5); tarsus, 18.5–19.5 (19.1); middle toe, 13–14.5 (14).

Female:<sup>2</sup> Wing, 95–102 (99.2); tail, 57–69 (63.8); exposed culmen, 19–22 (20.5); tarsus, 17–18 (17.7); middle toe, 12.5–13 (12.8).

*Type-locality*.—Cape San Lucas, Lower California.

*Geographical distribution*.—Southern and central Lower California, Mexico: north to Rosarito, north central Lower California; south to Cape San Lucas.

Of this subspecies I have seen 47 examples, representing the localities below:

*Lower California*.—San Ignacio; Cape San Lucas; La Laguna; Rosarito; Santo Domingo; Miraflores; San Jose del Cabo; Todos Santos; Pescadero (10 miles south of Todos Santos); Santa Anita; El Cajoncito; San Francisco Mountains.

DRYOBATES SCALARIS EREMICUS, new subspecies.

*Chars. subsp.*—Similar to *Dryobates scalaris lucasanus*, but larger; lower surface darker; upper parts darker, the white bars on back averaging narrower and less regular, the black bars wider; black bars on posterior lower parts averaging somewhat wider.

*Description*.—Type, adult male, No. 196255, U.S.N.M., Biological Survey collection; San Fernando, Lower California, Mexico, September 4, 1905; E. W. Nelson and E. A. Goldman. Crown and nape black, the feathers of the former subterminally dull white, terminally poppy red, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; remaining upper parts black, all, excepting the superior tail-coverts, barred with white—these white bars decidedly narrower than the black interspaces; tail black, the three outer pairs of feathers, including the dwarfed outermost one, barred with white, except on basal portion of inner webs of the third pair, but the outer vanes of the second (the first long pair) and third wholly white basally; the fourth pair irregularly barred with white on terminal portion of both webs, and outer vanes broadly margined with white for most of the rest of their length; wings black, with numerous spots of white, which, on tertials and some of the large upper wing-coverts, become fairly well-defined bars; sides of head and neck light smoky brown, the superciliary stripe paler; a broad postocular and a malar stripe of black, which meet on the side of the neck; nasal tufts and under surface light smoky brown; the lower abdomen and crissum decidedly whitish, in rather abrupt contrast; sides of

<sup>1</sup> Ten specimens, from southern Lower California.

<sup>2</sup> Ten specimens, from the same locality.

breast and body with spots of black, the flanks and crissum with bars of the same; lining of wing white, sparingly spotted with black.

*Measurements.*—Male:<sup>1</sup> Wing, 104–111 (average, 106.6) mm.; tail, 64–72 (68); exposed culmen, 24–28.5 (26.9); tarsus, 19.5–21 (20.4); middle toe, 13–15 (14).

Female:<sup>2</sup> Wing, 98.5–104.5 (101.4); tail, 66–67.5 (66.9); exposed culmen, 22.5–25.5 (23.9); tarsus, 17.5–19.5 (18.9); middle toe, 13–14 (13.4).

*Type-locality.*—San Fernando, Lower California.

*Geographical distribution.*—North central and northwestern Lower California: north to Nachoguero Valley, northwestern Lower California; northeast to 45 miles east of San Quintin; south to Ubai and Playa Maria Bay, north central Lower California.

Specimens examined, 29, from the places that follow:

*Lower California.*—Ensenada; Ubai; San Fernando; Rosario; San Simon River, near San Quintin; 45 miles east of San Quintin; San Telmo; Playa Maria; Playa Maria Bay; Rancho Layla; Nachoguero Valley.

**DRYOBATES SCALARIS CACTOPHILUS. new subspecies.**

*Chars. subsp.*—Much like *Dryobates scalaris eremicus*, but smaller, particularly the tail and bill; lower surface lighter, laterally almost always *streaked* with black; upper parts lighter—the black bars on back and scapulars narrower; wing-quills with larger spots and broader bars of white; outer long rectrices with exterior webs barred throughout with black; black bars on posterior lower surface narrower.

*Description.*—Type, adult male, No. 119415, U.S.N.M.; Tucson, Arizona, November 30, 1890; P. L. Jouy. Crown and nape black, the feathers of the former subterminally white, terminally scarlet vermilion, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; rest of upper surface of body black, all, excepting the superior tail-coverts, barred with white—these white bars rather narrower than the black interspaces; tail black, the three outer pairs of feathers, including the dwarfed outermost one, barred throughout with white, the fourth pair barred with white on terminal portion of inner webs and on all but a small basal part of outer webs; wings black, much spotted with white, this forming, on tertials and longer wing-coverts, fairly well-defined bars; sides of head and neck pale brownish, with a postocular and a malar stripe of black, which meet on the side of the neck; nasal tufts and lower surface dull light smoky brownish, more whitish on lower abdomen and crissum; the sides of breast and body with spots and some streaks of black, the

<sup>1</sup> Ten specimens, from northern Lower California.

<sup>2</sup> Five specimens, from the same locality.

flanks and crissum with bars of the same; lining of wing white, with spots of black.

*Measurements*.—Male:<sup>1</sup> Wing, 102–109 (average, 105.1) mm.; tail, 57.5–68 (61.9); exposed culmen, 21.5–24.5 (23.1); tarsus, 18–19.5 (18.9); middle toe, 12.5–14 (13.2).

Female:<sup>2</sup> Wing, 97–104.5 (100.6); tail, 56–63.5 (59.7); exposed culmen, 17.5–22 (19.6); tarsus, 16–18.5 (17.1); middle toe, 11.5–13 (12.3).

*Type-locality*.—Tucson, Arizona.

*Geographical distribution*.—Southwestern United States and northwestern Mexico: west to Guaymas, southwestern Sonora; Cocopal Major Mountains and Gardners Laguna on Salton River, northeastern Lower California; Vallecito, Riverside, and Hesperia, southwestern California; north to Victorville, southwestern California; eastern base of Charleston Mountains, and Vegas Wash, southern Nevada; Santa Clara, southwestern Utah; Beaverdam, northwestern Arizona; Camp Verde and Holbrook, central Arizona; Glenwood, southwestern New Mexico; Abiquiu, middle northern New Mexico; Corona, central New Mexico; and Santa Rosa, central eastern New Mexico; east to Montoya, Fort Sumner, and the Guadalupe Mountains, eastern New Mexico; Fort Davis and Tornillo Creek, central western Texas; south to the Chisos Mountains, central western Texas; Rio Sestin, northwestern Durango; Nacori, south central Sonora; Guaymas, southwestern Sonora; and Colony (Colorado River), northeastern Lower California.

From *Dryobates scalaris bairdi* this form differs in its much less deeply smoky under surface, sometimes with lateral black spots (always streaks in *D. s. bairdi*); lighter upper parts—the black bars narrower, the white bars broader, the pileum with more white; wider white bars on wings; larger white spots on remiges; and much larger white spots on outer webs of primary coverts. It may be distinguished from *Dryobates scalaris scalaris* by its much greater size; paler lower surface, which has usually streaks on breast and sides, instead of only spots, and these markings of black heavier; broader black bars on upper parts; larger white spots and broader white bars on remiges; wider postocular and malar stripes, the latter extending quite to the base of the bill; and more extensive white spots on the outer webs of the primary coverts.

The birds from northwestern Durango are somewhat smaller and darker than those from Arizona, and verge thus toward *Dryobates scalaris centrophilus*,<sup>3</sup> but seem to be nearer the present form. Examples from Nacori and Bacadehuachy, central Sonora, are small and dark, and incline thus toward *Dryobates scalaris agnus*, though

<sup>1</sup> Ten specimens, from Arizona and southern Utah.

<sup>2</sup> Twenty-two specimens, from Arizona, Sonora, and northeastern Lower California;

<sup>3</sup> See p. 157.

in other characters they are like Arizona specimens. In central western Texas the birds are as small as *Dryobates scalaris symplectus*,<sup>1</sup> but in color are just like *D. s. cactophilus*, so, since color is the most reliable distinction between these two forms, these intermediates belong with the latter.

Birds from New Mexico and Chihuahua are likewise slightly smaller than those from Arizona. In northeastern Lower California and in southern California north to Palm Springs and Needles there occur occasional specimens which have no black bars on the outer web of the outermost long rectrix, indicating intergradation with *Dryobates scalaris eremicus*; and the writer himself in times past has identified some of these as *Dryobates scalaris lucasanus* (i. e., *D. s. eremicus*). In the same regions, however, there are also birds with this feather fully barred; and all have the lighter colored upper parts and other characters of *Dryobates scalaris cactophilus*, to which race it is now evident that they belong. This disposition makes it necessary to expunge *Dryobates scalaris lucasanus* (i. e., *Dryobates scalaris eremicus*) from the list of California birds.

Of the present new race, 202 specimens have been seen, from the localities that follow:

*Arizona*.—Beaverdam; Phoenix; Calabasas; Fort Verde; Tucson; Gila River; Oracle; Buenos Ayres (Pima County); La Osa (Pima County); Santa Cruz River, west of Patagonia Mountains, near the Mexican boundary line; Pinal County; Fort Lowell; Fort Whipple; Sturgis Well, 2 miles west of Poso Verde (Pima County); Lowell; Fort Huachuca; Huachuca Mountains; Warsaw Mills (Pima County); Cochise; Fort Yuma; San Bernardino River at Mexican boundary line; San Bernardino Ranch, Mexican boundary line; Santa Catalina Mountains; San Pedro, 5 miles north of Nogales; Russellville (Cochise County); Colorado River at Monument 204, Mexican boundary line; Fort Buchanan; Camp 122, Kennerly and Möllhausen, on Bill Williams Fork, below mouth of Rio Santa Maria.

*California*.—Hesperia; Needles; Mountain Spring, near Mexican boundary line (San Diego County); Whitewater; Vallecito; Walters (Riverside County); La Puerta (San Diego County); Palm Springs (25 miles southeast of Banning); Mecca (Riverside County).

*New Mexico*.—Albuquerque; Organ Mountains; Silver City; Cliff; Santa Rosa; Deming; Abiquiu; Apache; Fort Cummings; San Francisco River; Socorro; Hachita; Lone Mountain; Carrizalillo Spring; Chamberino; Redrock; western side of San Luis Mountains; Los Pinos; Dry Canyon (Otero County); Lake Valley.

<sup>1</sup> See p. 155.



*Texas*.—Fort Davis; El Paso; Presidio County; Davis Mountains, 20 miles southwest of Toyahvale; Chisos Mountains; Fort Hancock; mouth of Tornillo Creek (near Boquillas); 25 miles south of Alpine.

*Utah*.—Santa Clara.

*Chihuahua*.—Colonia Diaz; Colonia Juarez; Casas Grandes; San Diego; Chihuahua City; Boca Grande.

*Durango*.—Cienega de las Vacas; Rio Sestin; Las Bocas; Rancho Baillon; Rosario.

*Lower California*.—Gardners Laguna, Salton River; Cocopah Major Mountains; Colony, lower Colorado River; lower Colorado River, above Colony.

*Sonora*.—Magdalena; Bacadelhuachy; Sonoyta, 1 mile south of Nogales; Poso de Luis; Colorado River, below Colonia Diaz; Oputo; Nacori; Guaymas; Santa Cruz.

DRYOBATES SCALARIS SYMPLECTUS, new subspecies.

*Chars. subsp.*—Resembling *Dryobates scalaris cactophilus*, but male smaller; upper parts lighter, the white bars wider, the black bars narrower, and with more white on pileum; and sides of breast less often streaked (mostly spotted).

*Description*.—Type, adult male, No. 140730, U.S.N.M., Biological Survey collection; mouth of Nueces River, Texas, November 21, 1891; William Lloyd. Crown and nape black, the feathers of the former subterminally white, terminally scarlet vermilion, this producing a mottled appearance on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; rest of upper surface of body black, all, except superior tail-coverts, broadly barred with white—these white bars broader than the black interspaces; tail black, the three outer pairs of feathers, including the dwarfed outermost one, barred throughout with white; the fourth pair barred terminally on inner vane, and for distal half on outer vane, and spotted on basal part of outer vane, with white; wings black, much spotted with white, this forming, on tertials and some longer wing-coverts, fairly well-defined bars; sides of head and neck brownish white, with a postocular and a malar stripe of black, which meet on the side of the neck; nasal tufts and lower surface dull light brownish, the sides of breast and body with spots of black, the flanks and crissum with bars of the same; lining of wing white, with spots of black.

*Measurements*.—Male:<sup>1</sup> Wing, 98–107 (average, 102.3) mm.; tail, 53.5–60.5 (56.9); exposed culmen, 20–24 (22.4); tarsus, 16–18.5 (17.7); middle toe, 12–13.5 (12.6).

<sup>1</sup> Eighteen specimens, from Texas, Tamaulipas, and Nuevo Leon.

Female:<sup>1</sup> Wing, 96.5–105 (100.4); tail, 52.5–60.5 (56.9); exposed culmen, 18–21 (20.3); tarsus, 16.5–18.5 (17.3); middle toe, 11–13 (12.1).

*Type-locality*.—Mouth of Nueces River, Texas.

*Geographical distribution*.—Middle southern United States and northeastern Mexico: south to Calhoun County, southeastern Texas; Xicotencatl, southern Tamaulipas; and Monterey, central western Nuevo Leon; west to Santa Catarina, central western Nuevo Leon; Sabinas, northeastern Coahuila; Samuels, Fort Lancaster, Grand Falls, Gail, and Tascosa, western Texas; and Saint Charles Canyon, southeastern Colorado; north to Swink, southeastern Colorado; McClellan Creek (Gray County), Vernon, and Gainesville, northern Texas; east to Springfield, southeastern Colorado; Smith County and Houston, eastern Texas; San Fernando de Presas, and Soto la Marina, eastern Tamaulipas.

This new subspecies differs from *Dryobates scalaris bairdi*, from Hidalgo, much as does *Dryobates scalaris cactophilus*, except that it is smaller, and still more extensively white on all the upper parts.

This race reaches its extreme development in Texas; and specimens from central Tamaulipas and central Nuevo Leon are not so light above, showing a tendency toward *Dryobates scalaris bairdi*. They are also somewhat more smoky below. There is, however, no difference in size between examples from Texas and Tamaulipas.

Of this form, 170 specimens have been examined, the following localities being represented:

*Colorado*.—Saint Charles Canyon (Pueblo County).

*Texas*.—Mouth of Pecos River; Eagle Pass; Dan Diego; Vernon; Kerrville; Samuels; Seguin; 7 miles west of Camp Verde; Rio Grande City; Cameron County; mouth of Devils River; Blocker's ranch, San Lorenzo Creek (Dimmitt County); Langtry; Del Rio; Colorado; Fort Clark; Brownsville; San Antonio; Laredo; Boerne; Concho County; Eastland; Lomita; Nueces River; Comanche County; Cisco; Corpus Christi; Hidalgo; Brownwood; Dallas; Leon Springs; Mud Creek (Val Verde County); Aransas River; Santa Maria; Bexar County; Kendall County; mouth of Nueces River; Uvalde; Coleman County.

*Coahuila*.—Sabinas.

*Nuevo Leon*.—Rodriguez; Santa Catarina; Monterey; San Juan Ranch; Boquillo.

*Tamaulipas*.—Forlon; Villagran; Soto la Marina; Mier; Camargo; Matamoros; Xicotencatl; Rio del Pilon; Victoria; San Fernando de Presas.

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<sup>1</sup> Nineteen specimens, from Texas and Tamaulipas.

DRYOBATES SCALARIS CENTROPHILUS, new subspecies.

*Chars. subsp.*—Similar to *Dryobates scalaris symplectus*, but bill shorter; lower surface darker, laterally always *streaked* with black; also sides of head and neck more deeply smoky; upper parts much darker, the white bars decidedly narrower, the black ones broader; white bars on wing-quills much narrower, the white spots much smaller, and with less white on pileum; outer webs of primary coverts with much smaller spots of white.

*Description.*—Type, adult male, No. 155991, U.S.N.M., Biological Survey collection; Ameca, Jalisco, Mexico, March 3, 1897; E. W. Nelson and E. A. Goldman. Crown and nape black, the feathers of the former subterminally white, terminally scarlet vermilion, this producing a mottled effect on the top of the head, but merging into a solid band of red on the occiput and anterior hind neck; rest of upper body surface black, all, except the superior tail-coverts, barred with white—these white bars decidedly narrower than the black interspaces; tail black, the three exterior pairs of feathers, including the dwarfed outermost one, barred throughout with white except on basal portion of inner web of third pair; the fourth pair barred on most of outer vane and on terminal portion of inner vane with white; wings black, much spotted with white, this forming, on tertials and longer wing-coverts, fairly well-defined bars; sides of head and neck pale brownish, with a postocular and a malar stripe of black, which meet on the side of the neck; nasal tufts and entire under parts rather light smoky brown, the lower abdomen and crissum whitish; the sides of breast and body with streaks of black; the flanks and crissum with bars of the same; lining of wing white, with spots of black.

*Measurements.*—Male:<sup>1</sup> Wing, 100–105 (average, 102.4) mm.; tail, 56–63.5 (57.7); exposed culmen, 19.5–23 (20.9); tarsus, 16.5–17.5 (17.1); middle toe, 11.5–13 (12.3).

Female:<sup>2</sup> Wing, 97–103.5 (99.6); tail, 54–62.5 (56.9); exposed culmen, 16.5–18 (17.5); tarsus, 16–17 (16.4); middle toe, 10.5–12 (11.4).

*Type-locality.*—Ameca, Jalisco, Mexico.

*Geographical distribution.*—Central western Mexico: north to Durango, southern Durango; east to San Juan Capistrano, central western Zacatecas; Bolaños, northern Jalisco; Ocotlan, central eastern Jalisco; and Patamban, northwestern Michoacan; south to Uruapam, northwestern Michoacan; and Sierra Nevada de Colima, southern Jalisco; west to near Mascota, western Jalisco; and Arroyo de Javilan, southern Tepic.

<sup>1</sup> Six specimens, from the Mexican States of Jalisco, Zacatecas, and southern Durango.

<sup>2</sup> Seven specimens, from the Mexican States of Jalisco and Michoacan.

From *Dryobates scalaris cactophilus* this form may be distinguished by smaller size; more deeply colored ventral surface, with only streaks (no spots) on the sides of the breast; darker upper parts, the white bars slightly narrower, the black ones somewhat broader; and smaller white spots on outer webs of primary coverts. It differs from *Dryobates scalaris sinaloensis* in its much greater dimensions; lighter under surface; entirely black-barred outer web of outermost long rectrix; wider postocular and malar stripes, the latter not obsolete at base of bill; somewhat broader black bars on upper parts; and wider black bars on the tail-feathers. Compared to *Dryobates scalaris azelus*, it is very much larger; has the outer web of outermost long rectrix barred throughout with black; the breast and sides streaked, instead of spotted, but less heavily thus marked; wider postocular and malar stripes, the latter always extending to the base of the bill; somewhat broader black bars above; and somewhat more white on outer webs of primary coverts. It may be separated from *Dryobates scalaris scalaris* by its decidedly greater size; streaked instead of spotted, and more heavily thus marked sides of breast; broader black bars on upper surface; wider postocular and malar stripes, the latter not obsolete at the base of the bill.

Specimens from La Pisagua, Jalisco, are of the same size as the present form, but are more extensively white above, and in this, as well as other respects, appear to be somewhat intermediate between *Dryobates s. centrophilus* and *Dryobates s. azelus*, though nearer, of course, to the former. Birds from Aguas Calientes<sup>1</sup> we have not seen, and they may belong to either *Dryobates scalaris centrophilus* or *Dryobates scalaris bairdi*.

Eighteen examples have been available, from the Mexican localities below:

*Durango*.—Durango.

*Jalisco*.—Atemajac (north of Guadalajara); Ocotlan; Ameca; La Pisagua; Las Canoas; Guadalajara.

*Michoacan*.—Patamban; Uruapam.

*Tepic*.—Arroyo de Gavilan (near Amatlan).

*Zacatecas*.—San Juan Capistrano.

DRYOBATES SCALARIS BAIRDI (Malherbe).

*Picus bairdi* MALHERBE, Mon. Piciidées, vol. 1, 1861, p. 118, pl. 27, figs. 7, 8 (Selater MS.).

*Chars. subsp.*—Resembling *Dryobates scalaris centrophilus*, but somewhat larger; ventral surface darker; black bars on the back broader; and postocular stripe wider.

*Measurements*.—Male:<sup>2</sup> Wing, 102–107.5 (average, 104.4) mm.; tail, 56–62.5 (60.1); exposed culmen, 20–23.5 (22.1); tarsus, 17–18.5 (17.7); middle toe, 12–14 (12.7).

<sup>1</sup> Hargitt, Cat. Birds Brit. Mus., vol. 18, 1890, p. 248.

<sup>2</sup> Seven specimens, from the Mexican States of Hidalgo, Guanajuato, Coahuila, and San Luis Potosi.



Female:<sup>1</sup> Wing, 97.5–103 (101.7); tail, 57–62 (59.8); exposed culmen, 19.5–20.5 (20); tarsus, 16–17 (16.8); middle toe, 12–13 (12.3).

*Type-locality*.—"Mexico": i. e., the State of Hidalgo.

*Geographical distribution*.—Central Mexico: north to Jaral, southern Coahuila; east to La Ventura, southeastern Coahuila; Pachuca, southern Hidalgo; and Chalchicomula, central eastern Puebla; south to Puebla and Atlixco, central western Puebla; and Mexico City, eastern Mexico (State); west to Silao, southwestern Guanajuato; Ahualulco, southwestern San Luis Potosi; and Cedros, northeastern Zacatecas.

The present subspecies may be distinguished from *Dryobates scalaris scalaris* by its much greater size; darker ventral surface, with streaks, instead of spots, on breast and sides, and these markings heavier; darker upper surface, the black bars much wider—of about the same width as the white bars—the pileum with less white; and broader postocular and malar stripes, the latter reaching to the bill.

The birds from the Valley of Mexico, although not examined in the present connection, belong doubtless to this form. The *Picus bairdi* of Malherbe,<sup>2</sup> described from simply "Mexico," is clearly the bird from the State of Hidalgo, as his description, remarks, and plate conclusively show, and to this we therefore restrict the name *bairdi*.

Of this form, 13 examples have been examined, from the localities that follow:

*Coahuila*.—La Ventura; Carneros; Jaral.

*Guanajuato*.—Silao.

*Hidalgo*.—Tula; Pachuca.

*Puebla*.—Chalchicomula; Puente Colorado.

*San Luis Potosi*.—Hacienda La Parada; Ahualulco.

<sup>1</sup> Six specimens, from the States of Hidalgo, Puebla, Coahuila, and San Luis Potosi, Mexico.

<sup>2</sup> Mon. Picidées, vol. 1, 1861, p. 118, pl. 27, figs. 7, 8.